

SEQUENCE LISTING

<110> Haruo Sugiyama  
Chugai Seiyaku Kabushiki Kaisha  
Sumitomo Pharmaceuticals Company, Limited

<120> HLA-A24-RESTRICTED CANCER ANTIGEN PEPTIDES

<130> 540883HT

<140> PCT/JP03/07463

<141> 2003-06-12

<150> JP 2002-171518

<151> 2002-06-12

<150> JP 2002-275572

<151> 2002-09-20

<160> 68

<210> 1

<211> 449

<212> PRT

<213> Homo sapiens

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Ser Leu Gly Gly Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala  
20 25 30

Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr  
35 40 45

Gly Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro  
50 55 60

Pro Pro Pro Pro His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly  
65 70 75 80

Ala Glu Pro His Glu Glu Gln Cys Leu Ser Ala Phe Thr Val His Phe  
85 90 95

Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys Arg Tyr Gly Pro Phe  
100 105 110

Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly Gln Ala Arg Met Phe  
115 120 125

Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu Ser Gln Pro Ala Ile  
130 135 140

Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp Gly Thr Pro Ser Tyr  
145 150 155 160

Gly	His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe	165	170	175
Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln	180	185	190
Tyr	Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser	195	200	205
Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp	210	215	220
Asn	Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln	225	230	235
Met	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	Val	Ala	Ala	Gly	Ser	Ser	Ser	245	250	255
Ser	Val	Lys	Trp	Thr	Glu	Gly	Gln	Ser	Asn	His	Ser	Thr	Gly	Tyr	Glu	260	265	270
Ser	Asp	Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	275	280	285
His	Thr	His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	290	295	300
Gly	Val	Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	305	310	315
Arg	Pro	Phe	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys	325	330	335
Leu	Ser	His	Leu	Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro	340	345	350
Tyr	Gln	Cys	Asp	Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Ser	Arg	Ser	Asp	355	360	365
Gln	Leu	Lys	Arg	His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln	370	375	380
Cys	Lys	Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr	385	390	395
His	Thr	Arg	Thr	His	Thr	Gly	Lys	Thr	Ser	Glu	Lys	Pro	Phe	Ser	Cys	405	410	415
Arg	Trp	Pro	Ser	Cys	Gln	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Glu	Leu	Val	420	425	430
Arg	His	His	Asn	Met	His	Gln	Arg	Asn	Met	Thr	Lys	Leu	Gln	Leu	Ala	435	440	445

Leu

<210> 2  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 2  
Arg Tyr Phe Pro Asn Ala Pro Tyr Leu  
1 5

<210> 3  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 3  
Arg Tyr Pro Gly Val Ala Pro Thr Leu  
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<210> 4  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 4  
Arg Tyr Pro Ser Cys Gln Lys Lys Phe  
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<210> 5  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 5  
Ala Tyr Leu Pro Ala Val Pro Ser Leu  
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<210> 6  
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<220>

<223> Description of Artificial Sequence: Synthetic Peptide

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<210> 7

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 7

Arg Val Pro Gly Val Ala Pro Thr Leu

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<210> 8

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 8

Arg Met Phe Pro Asn Ala Pro Tyr Leu

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<210> 9

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 9

Arg Trp Pro Ser Cys Gln Lys Lys Phe

1

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<210> 10

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 10

Gln Tyr Arg Ile His Thr His Gly Val Phe  
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<210> 11  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 11  
Ala Tyr Pro Gly Cys Asn Lys Arg Tyr Phe  
1 5 10

<210> 12  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 12  
Arg Tyr Phe Pro Asn Ala Pro Tyr Phe  
1 5

<210> 13  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 13  
Arg Tyr Phe Pro Asn Ala Pro Tyr Trp  
1 5

<210> 14  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 14  
Arg Tyr Phe Pro Asn Ala Pro Tyr Ile  
1 5

<210> 15

<211> 9  
<212> PRT  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 15  
Arg Tyr Phe Pro Asn Ala Pro Tyr Met  
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<210> 16  
<211> 9  
<212> PRT  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 16  
Arg Tyr Pro Gly Val Ala Pro Thr Phe  
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<210> 17  
<211> 9  
<212> PRT  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 17  
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<210> 18  
<211> 9  
<212> PRT  
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 18  
Arg Tyr Pro Gly Val Ala Pro Thr Ile  
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<210> 19  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 19

Arg Tyr Pro Gly Val Ala Pro Thr Met

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<210> 20

<211> 9

<212> PRT

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 20

Arg Tyr Pro Ser Cys Gln Lys Lys Trp

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<210> 21

<211> 9

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 21

Arg Tyr Pro Ser Cys Gln Lys Lys Leu

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<210> 22

<211> 9

<212> PRT

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 22

Arg Tyr Pro Ser Cys Gln Lys Lys Ile

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<210> 23

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<212> PRT

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<223> Description of Artificial Sequence: Synthetic Peptide

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<210> 24  
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<212> PRT  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 25  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 26  
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<212> PRT  
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<400> 27  
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<210> 28  
<211> 9  
<212> PRT  
<213> Artificial Sequence



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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 28

Asn Tyr Met Asn Leu Gly Ala Thr Phe

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<210> 29

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 29

Asn Tyr Met Asn Leu Gly Ala Thr Trp

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<210> 30

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 30

Asn Tyr Met Asn Leu Gly Ala Thr Ile

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<210> 31

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 31

Asn Tyr Met Asn Leu Gly Ala Thr Met

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<210> 32

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 32

Phe Asn Asn Phe Thr Val Ser Phe Trp Leu Arg Val Pro Lys Val Ser  
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Ala Ser His Leu Glu  
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<210> 33  
 <211> 3857  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: The DNA region from position 1 to position 1550 is derived from human, and the DNA region from position 1551 to position 3857 is derived from mouse.

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 gtgaaaggag agggacgggg cccatgccga gggtttcttc cttgtttctc agacagctct 180  
 tgggccaaga ttcaggggaga cattgagaca gagcgcttgg cacagaagca gaggggtcag 240  
 ggcgaagtcc cagggcccca ggcgtggctc tcagggtctc aggccccgaa ggcgggtgat 300  
 ggattgggga gtcccagcct tggggattcc ccaactccgc agtttctttt ctccctctcc 360  
 caacctatgt agggtccttc ttcttgata ctacagacgc ggaccagtt ctactccca 420  
 ttgggtgtcg ggtttccaga gaagccaatc agtgctgtcg cggtcgctgt tctaaagtcc 480  
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 cgaacctcg tctgtctact ctggggggcc ctggccctga cccagacctg ggcaggtgag 600  
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 cgcaagaccc ggggaagccgc gccgggagga gggtcgggag ggtctcagcc actcctcgtc 720  
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 ttgggacgag gagacaggga aagtgaaggc ccactcacag actgaccgag agaacctgag 960  
 gatcgcgctc cgctactaca accagagcga ggcgggtgag tgaccccggc ccggggcgca 1020  
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 tgcagcgcac ggggtaccag ggccacgggg cgctacctg atcgctgta gatcctgtgt 1560  
 gacacacctg taccttgtcc cccagagtca ggggctggga gtcattttct ctggctacac 1620  
 acttagtgat ggctgttcac ttggactgac agttaatgtt ggtcagcaag gtgactacaa 1680  
 tggttgagtc tcaatggtgt caccttccag gatcatacag ccctaatttt aatatgaact 1740  
 caaacacata ttaaattagt tattttccat tccctcctcc attctttgac tacctctctc 1800  
 atgctattga acatcacata aggatggcca tgtttacca atggctcatg tggattccct 1860  
 cttagcttct gagtcccaaa agaaaatgtg cagtcctgtg ctgaggggac cagctctgct 1920  
 tttggtcact agtgcgatga cagttgaagt gtcaaacaga cacatagttc actgtcatca 1980  
 ttgatttaac tgagtcttgg gtagatttca gtttgtcttg ttaattgtgt gatttcttaa 2040  
 atcttccaca cagattcccc aaaggcccat gtgacccatc acagcagacc tgaagataaa 2100  
 gtcacctga ggtgctgggc cctgggcttc taccctgctg acatcaccct gacctggcag 2160  
 ttgaattggg aggagctgat ccaggacatg gagcttgttg agaccaggcc tgcaggggat 2220  
 ggaaccttcc agaagtgggc atctgtggtg gtgcctcttg ggaaggagca gtattacaca 2280  
 tgccatgtgt accatcaggg gctgcctgag cccctcaccc tgagatgggg taaggagagt 2340

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gaaagggcag	agtctgagtt	ttctctcagc	ctcctttaga	gtgtgctctg	ctcatcaatg	2640
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gacactctag	ggctctgattg	gggaggggca	atgtggacat	gattgggttt	caggaactcc	3060
cagaatcccc	tgtgagtgag	tgatgggttg	ttcgaatgtt	gtcttcacag	tgatgggttca	3120
tgaccctcat	tctctagcgt	gaagacagct	gcctggagtg	gacttggtga	cagacaatgt	3180
cttctcatat	ctcctgtgac	atccagagcc	ctcagttctc	tttagtcaag	tgtctgatgt	3240
tcctgtgag	cctatggact	caatgtgaag	aactgtggag	cccagtcac	ccctctacac	3300
caggaccctg	tccctgcact	gctctgtctt	cccttcaca	gccaaccttg	ctggttcagc	3360
caaacactga	gggacatctg	tagcctgtca	gctccatgct	accctgacct	gcaactcctc	3420
acttccacac	tgagaataat	aatttgaatg	taaccttgat	tgttatcacc	ttgacctagg	3480
gctgatttct	tgttaatttc	atggattgag	aatgcttaga	ggttttgttt	gtttgtttga	3540
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gtgccgaggt	gggtctcagtt	tgctttgata	tgtgatgggg	ccacacctcc	actgtgtcac	3720
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acacagggaa	ggcctgagcc	ttgccctgtc	cccaggatta	tgagcccca	gggctaaaga	3840
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<210> 34

<211> 1119

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: The DNA region from position 1 to position 618 is derived from human, and the DNA region from position 619 to position 1119 is derived from mouse.

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Met Ala Val Met Ala Pro Arg Thr Leu Val Leu Leu Leu Ser Gly Ala	
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ctg gcc ctg acc cag acc tgg gca ggc tcc cac tcc atg agg tat ttc	96
Leu Ala Leu Thr Gln Thr Trp Ala Gly Ser His Ser Met Arg Tyr Phe	
20 25 30	
tcc aca tcc gtg tcc cgg ccc ggc cgc ggg gag ccc cgc ttc atc gcc	144
Ser Thr Ser Val Ser Arg Pro Gly Arg Gly Glu Pro Arg Phe Ile Ala	
35 40 45	
gtg ggc tac gtg gac gac acg cag ttc gtg cgg ttc gac agc gac gcc	192
Val Gly Tyr Val Asp Asp Thr Gln Phe Val Arg Phe Asp Ser Asp Ala	
50 55 60	
gcg agc cag agg atg gag ccg cgg gcg ccg tgg ata gag cag gag ggg	240
Ala Ser Gln Arg Met Glu Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly	

65	70	75	80	
ccg gag tat tgg gac gag gag aca ggg aaa gtg aag gcc cac tca cag				288
Pro Glu Tyr Trp Asp Glu Glu Thr Gly Lys Val Lys Ala His Ser Gln				
	85	90	95	
act gac cga gag aac ctg cgg atc gcg ctc cgc tac tac aac cag agc				336
Thr Asp Arg Glu Asn Leu Arg Ile Ala Leu Arg Tyr Tyr Asn Gln Ser				
	100	105	110	
gag gcc ggt tct cac acc ctc cag atg atg ttt ggc tgc gac gtg ggg				384
Glu Ala Gly Ser His Thr Leu Gln Met Met Phe Gly Cys Asp Val Gly				
	115	120	125	
tcg gac ggg cgc ttc ctc cgc ggg tac cac cag tac gcc tac gac ggc				432
Ser Asp Gly Arg Phe Leu Arg Gly Tyr His Gln Tyr Ala Tyr Asp Gly				
	130	135	140	
aag gat tac atc gcc ctg aaa gag gac ctg cgc tct tgg acc gcg gcg				480
Lys Asp Tyr Ile Ala Leu Lys Glu Asp Leu Arg Ser Trp Thr Ala Ala				
	145	150	155	160
gac atg gcg gct cag atc acc aag cgc aag tgg gag gcg gcc cat gtg				528
Asp Met Ala Ala Gln Ile Thr Lys Arg Lys Trp Glu Ala Ala His Val				
	165	170	175	
gcg gag cag cag aga gcc tac ctg gag ggc acg tgc gtg gac ggg ctc				576
Ala Glu Gln Gln Arg Ala Tyr Leu Glu Gly Thr Cys Val Asp Gly Leu				
	180	185	190	
cgc aga tac ctg gag aac ggg aag gag acg ctg cag cgc acg gat tcc				624
Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Ser				
	195	200	205	
cca aag gcc cat gtg acc cat cac agc aga cct gaa gat aaa gtc acc				672
Pro Lys Ala His Val Thr His His Ser Arg Pro Glu Asp Lys Val Thr				
	210	215	220	
ctg agg tgc tgg gcc ctg ggc ttc tac cct gct gac atc acc ctg acc				720
Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Asp Ile Thr Leu Thr				
	225	230	235	240
tgg cag ttg aat ggg gag gag ctg atc cag gac atg gag ctt gtg gag				768
Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln Asp Met Glu Leu Val Glu				
	245	250	255	
acc agg cct gca ggg gat gga acc ttc cag aag tgg gca tct gtg gtg				816
Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ser Val Val				
	260	265	270	
gtg cct ctt ggg aag gag cag tat tac aca tgc cat gtg tac cat cag				864
Val Pro Leu Gly Lys Glu Gln Tyr Tyr Thr Cys His Val Tyr His Gln				
	275	280	285	
ggg ctg cct gag ccc ctc acc ctg aga tgg gag cct cct cca tcc act				912
Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp Glu Pro Pro Pro Ser Thr				
	290	295	300	

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Leu	Ala	Leu	Thr	Gln	Thr	Trp	Ala	Gly	Ser	His	Ser	Met	Arg	Tyr	Phe	
			20					25					30			
Ser	Thr	Ser	Val	Ser	Arg	Pro	Gly	Arg	Gly	Glu	Pro	Arg	Phe	Ile	Ala	
		35					40					45				
Val	Gly	Tyr	Val	Asp	Asp	Thr	Gln	Phe	Val	Arg	Phe	Asp	Ser	Asp	Ala	
	50					55					60					
Ala	Ser	Gln	Arg	Met	Glu	Pro	Arg	Ala	Pro	Trp	Ile	Glu	Gln	Glu	Gly	
65					70					75					80	
Pro	Glu	Tyr	Trp	Asp	Glu	Glu	Thr	Gly	Lys	Val	Lys	Ala	His	Ser	Gln	
				85					90					95		
Thr	Asp	Arg	Glu	Asn	Leu	Arg	Ile	Ala	Leu	Arg	Tyr	Tyr	Asn	Gln	Ser	
			100					105					110			
Glu	Ala	Gly	Ser	His	Thr	Leu	Gln	Met	Met	Phe	Gly	Cys	Asp	Val	Gly	
		115					120					125				

Ser Asp Gly Arg Phe Leu Arg Gly Tyr His Gln Tyr Ala Tyr Asp Gly  
 130 135 140  
 Lys Asp Tyr Ile Ala Leu Lys Glu Asp Leu Arg Ser Trp Thr Ala Ala  
 145 150 155 160  
 Asp Met Ala Ala Gln Ile Thr Lys Arg Lys Trp Glu Ala Ala His Val  
 165 170 175  
 Ala Glu Gln Gln Arg Ala Tyr Leu Glu Gly Thr Cys Val Asp Gly Leu  
 180 185 190  
 Arg Arg Tyr Leu Glu Asn Gly Lys Glu Thr Leu Gln Arg Thr Asp Ser  
 195 200 205  
 Pro Lys Ala His Val Thr His His Ser Arg Pro Glu Asp Lys Val Thr  
 210 215 220  
 Leu Arg Cys Trp Ala Leu Gly Phe Tyr Pro Ala Asp Ile Thr Leu Thr  
 225 230 235 240  
 Trp Gln Leu Asn Gly Glu Glu Leu Ile Gln Asp Met Glu Leu Val Glu  
 245 250 255  
 Thr Arg Pro Ala Gly Asp Gly Thr Phe Gln Lys Trp Ala Ser Val Val  
 260 265 270  
 Val Pro Leu Gly Lys Glu Gln Tyr Tyr Thr Cys His Val Tyr His Gln  
 275 280 285  
 Gly Leu Pro Glu Pro Leu Thr Leu Arg Trp Glu Pro Pro Pro Ser Thr  
 290 295 300  
 Val Ser Asn Met Ala Thr Val Ala Val Leu Val Val Leu Gly Ala Ala  
 305 310 315 320  
 Ile Val Thr Gly Ala Val Val Ala Phe Val Met Lys Met Arg Arg Arg  
 325 330 335  
 Asn Thr Gly Gly Lys Gly Gly Asp Tyr Ala Leu Ala Pro Gly Ser Gln  
 340 345 350  
 Thr Ser Asp Leu Ser Leu Pro Asp Cys Lys Val Met Val His Asp Pro  
 355 360 365  
 His Ser Leu Ala  
 370

<210> 36

<211> 36

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR primer

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<210> 37  
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<210> 38  
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<223> Description of Artificial Sequence: PCR primer

<400> 38  
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<210> 39  
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<400> 39  
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 <400> 43  
 agcatagtcc cctccttttc cac 23  
  
 <210> 44  
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 <210> 45  
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<212> PRT  
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<220>  
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Pro Tyr Val Ser Arg Leu Leu Gly Ile  
5

<210> 47  
<211> 9  
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<220>  
<223> Synthetic Peptide

<400> 47  
Ile Met Pro Lys Ala Gly Leu Leu Ile  
5

<210> 48  
<211> 9  
<212> PRT  
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<220>  
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<400> 48  
Thr Tyr Ala Cys Phe Val Ser Asn Leu  
5

<210> 49  
<211> 10  
<212> PRT  
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<220>  
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<400> 49  
Gln Tyr Ser Trp Phe Val Asn Gly Thr Phe  
5 10

<210> 50  
<211> 16  
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<400> 50

Ala Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu  
1 5 10 15

<210> 51

<211> 9

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 51

Ala Leu Leu Pro Ala Val Pro Ser Leu  
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<210> 52

<211> 9

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<400> 52

Asn Gln Met Asn Leu Gly Ala Thr Leu  
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<210> 53

<211> 9

<212> PRT

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<223> Description of Artificial Sequence: Synthetic Peptide

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Arg Phe Phe Pro Asn Ala Pro Tyr Leu  
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<210> 54

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<223> Description of Artificial Sequence: Synthetic Peptide

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Arg Trp Phe Pro Asn Ala Pro Tyr Leu  
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<210> 56  
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<210> 57  
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<400> 57  
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Arg Phe Pro Ser Cys Gln Lys Lys Phe  
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<210> 59  
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<223> Description of Artificial Sequence: Synthetic Peptide

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Arg Met Pro Ser Cys Gln Lys Lys Phe  
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<210> 60

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 60

Ala Phe Leu Pro Ala Val Pro Ser Leu  
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<210> 61

<211> 9

<212> PRT

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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 61

Ala Met Leu Pro Ala Val Pro Ser Leu  
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<210> 62

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<212> PRT

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<400> 62

Ala Trp Leu Pro Ala Val Pro Ser Leu  
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<210> 63

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<212> PRT

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<400> 63  
Asn Phe Met Asn Leu Gly Ala Thr Leu  
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<210> 64  
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<400> 64  
Asn Met Met Asn Leu Gly Ala Thr Leu  
1 5

<210> 65  
<211> 9  
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<400> 65  
Asn Trp Met Asn Leu Gly Ala Thr Leu  
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<210> 66  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic Peptide

<400> 66  
Arg Tyr Pro Ser Ser Gln Lys Lys Phe  
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<210> 67  
<211> 9  
<212> PRT  
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<223> Description of Artificial Sequence: Synthetic Peptide

<400> 67  
Arg Tyr Pro Ser Ala Gln Lys Lys Phe  
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<210> 68

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Peptide

<223> Xaa at position 5 stands for Abu.

<400> 68

Arg Tyr Pro Ser Xaa Gln Lys Lys Phe

1

5